REMARKS

The Official Action dated February 11, 2004 has been carefully reviewed and the foregoing amendment and the following remarks have been made in response thereto. Prior to entry of the foregoing amendment claims 1 through 6 were active in the present application. Claims 1 through 6 stand rejected under 35 U.S.C. §103(a). Claims 1 and 2 are rejected as being unpatentable over Martino et al (US Patent No. 6,061,646) in view of Slyh et al. (US Patent No. 5,574,824). Claims 3 and 4 are rejected as being unpatentable over Martino et al. in view of Slyh et al. and Nagata (US Patent No. 6,009,396). Claims 5 and 6 are rejected as being unpatentable over Martino et al. in view of Nagata.

The foregoing amendment requests the cancellation of claims 1 and 2. Applicant respectfully submits that remaining claims 3 through 6 are in condition for allowance for the reasons set forth below. Should the Examiner insist otherwise, the claims are also believed to be in suitable form for consideration on appeal.

Rejection of Claims 3-4 under 35 U.S.C. 103(a)

The rejection of claims 3 and 4 under 35 U.S.C. §103(a) as being unpatentable over Martino in view of Slyh et al. and Nagata is respectfully traversed, as (i) the references, singly or in combination, fail to teach or disclose all limitations of the rejected claims and (ii) there is no suggestion or motivation to combine the references.

Regarding (i), the Office Action states that the Applicant's arguments made in the December 12, 2003 response with respect to claims 3-4 have been considered moot in view of the new grounds of rejection. Yet the new rejection of claim 3 states, as did the original rejection, that "Nagata discloses that all peaks above a threshold are detected as sound sources (Nagata Col. 10, Ln. 4-5)," which the Official Actions state is the equivalent of identifying lobes having a relatively low noise content. Applicant respectfully disagrees.

In the first response Applicant pointed out that "Peaks above threshold may be detected as the sound sources" is not equivalent to "identifying lobes having a relatively low noise content," and that the cited sections of the Nagata reference do not support such a contention. The Final Office Action has not addressed this argument and has simply restated that they are equivalents.

Applicant respectfully disagrees and maintains the validity of the original argument. Specifically, "Peaks above threshold may be detected as the sound sources" as taught by Nagata is not equivalent to "identifying lobes having a relatively low noise content," as taught by Applicant. Although the present application teaches a function similar to that taught by Nagata, i.e., that "a minimal level of sound can be established which is considered acceptable," (page 13, lines 3-4), this is not what the Applicant is claiming as the invention. Both the Applicant's excerpt from page 13, line 3-4 and the Nagata excerpt refer to sound, not noise, and both of these excerpts are concerned with the relative intensity of that sound.

The entire sentence from which the Nagata excerpt was taken reads, "By setting a prescribed threshold with reference to an average value of portions other than peak portions on the synthesized (total) sound source power distribution, such as 5 dB, and all peaks above this threshold may be detected as the sound sources, while not detecting any sound source at all when there is no peak above this threshold (Col. 9, Ln. 67 through Col. 10, Ln. 6)." "Above this threshold" refers back to 5 dB (Col. 10, Ln. 3), which is a measure of the intensity of sound. The measure makes no distinction to type of sound, i.e., speech or noise, as suggested in the Office Action. Furthermore, when "all peaks above this threshold may be detected as a sound source" is read in light of the entire Nagata disclosure, it is obvious that the reference is intended to reduce the calculations necessary to carry out the disclosed method.

Moreover, in reference to element "D," the Office Action states "it is obvious to actuate a lobe having both a relatively high speech content and relatively low noise content since one in the art would obviously like to put the prior signal processing to use in a meaningful way." The desire to put the prior signal processing to use in a meaningful way does not make actuating a lobe having both a relatively high speech content and a relatively low noise content obvious. Prior signal processing is essentially captured data or information. Any time a person deliberately causes data or information to be captured that person intends to use that data or information in a meaningful way. This does not make all meaningful uses of that data or information obvious. The same is true in the instant case. While "actuating a lobe having both a relatively high speech content and relatively low noise content" is one possibility among a plethora of meaningful uses that could be conceived, it does not logically follow that this one possibility is obvious. To hold such would be using impermissible hindsight.

Regarding (ii), the Official Action states that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Martino et al. to further include within a kiosk a steerable beam microphone array , having multiple lobes; ii) means for sampling lobes, and A) distinguishing the difference between speech content and noise content from sound signals received by each lobe, B) identifying lobes having a relatively high speech content, C) identifying lobes having a relatively low noise content, and D) actuating a lobe having both a relatively high speech content and relatively low noise content."

It is well established that "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *See* MPEP 2143

Applicant respectfully disagrees with the position taken in the Office Action that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the references. Applicant has carefully reviewed the applied references and can find no teachings in the references that support an obviousness rejection. Should the Examiner insist otherwise, convincing evidence showing that the suggestion or motivation to modify/combine was actually in the knowledge generally available to one of ordinary skill in the art at the time the present invention was made is respectfully requested.

Thus, as the references, singly or in combination, fail to teach or disclose all limitations of the rejected claims and there is no suggestion or motivation to combine the references, claim 3 and 4 are unobvious and these claims should now be allowed.

Rejection of Claims 5 and 6 under 35 U.S.C. 103(a)

The rejection of claims 5 and 6 under 35 U.S.C. §103(a) as being obvious over Martino in view of Nagata is respectfully traversed. Applicant reasserts that (i) the references, singly or in combination, fail to teach or disclose all limitations of the rejected claims and (ii) there is no suggestion or motivation to combine the references.

In regards to (i), when addressing the argument, in Applicant's December 12, 2003 response, the Final Office Action simply states, "Examiner disagrees," never addressing the merits of the Applicant's argument. The Final Official Action cites, as did the December 12, 2003 Office Action, that "Nagata discloses that all peaks on the sound source distribution above a threshold are detected as sound sources (Col. 10, Ln. 4-5)," and that "this is the equivalent of identifying lobes having a relatively low noise content." As explained earlier, this assertion is not support by Nagata.

In fact, "Peaks above threshold may be detected as the sound sources" as taught by Nagata is not equivalent to "identifying lobes having a relatively low

noise content," as taught by Applicant. Although the present application teaches a function similar to that taught by Nagata, i.e., that "a minimal level of sound can be established which is considered acceptable," (page 13, lines 3-4), this is not what the Applicant is claiming as the invention. Both the Applicant's excerpt from page 13, line 3-4 and the Nagata excerpt refer to sound, not noise, and both of these excerpts are concerned with the relative intensity of that sound.

The entire sentence from which the Nagata excerpt was taken reads, "By setting a prescribed threshold with reference to an average value of portions other than peak portions on the synthesized (total) sound source power distribution, such as 5 dB, and all peaks above this threshold may be detected as the sound sources, while not detecting any sound source at all when there is no peak above this threshold (Col. 9, Ln. 67 through Col. 10, Ln. 6)." "Above this threshold" refers back to 5 dB (Col. 10, Ln. 3), which is a measure of the intensity of sound. The measure makes no distinction to type of sound, i.e., speech or noise, as suggested in the Office Action. Furthermore, when "all peaks above this threshold may be detected as a sound source" is read in light of the entire Nagata disclosure, it is obvious that the reference is intended to reduce the calculations necessary to carry out the disclosed method.

Moreover, in reference to element "d," the office action states "it is obvious to select a lobe which carries larger speech signals than other lobes and smaller noise signals than other lobes since one in the art would obviously put the prior signal processing to use in a meaningful way in order to enhance speech recognition capabilities." The desire to put the prior signal processing to use in a meaningful way does not make selecting a lobe which carries larger speech signals than other lobes and smaller noise signals than other lobes obvious. Prior signal processing is essentially captured data or information. Any time a person deliberately causes data or information to be captured that person intends to use that

data or information in a meaningful way. This does not make all meaningful uses of that data or information obvious. The same is true in the instant case. While "selecting a lobe which carries larger speech signals than other lobes and smaller noise signals than other lobes" is one possibility among a plethora of meaningful uses that could be conceived, it does not logically follow that this one possibility is obvious. To hold such would be using impermissible hindsight.

Regarding (ii), the Official Action states that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Martino et al. to further comprise maintaining a beam-steerable microphone array at the self-service kiosk, measuring noise content and speech content of several lobes of the array, and selecting a lobe which carries larger speech signals than other lobes and smaller noise signals than other lobes because one of ordinary skill in the art would recognize that this would provide more accurate speech recognition for suppressing background noise and localizing sound sources effectively."

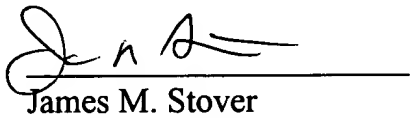
It is well established that "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *See* MPEP 2143

Applicant respectfully disagrees with the position taken in the Office Action that it would have been obvious to one of ordinary skill in the art at the time of invention to combine the references. Applicant has carefully reviewed the applied references and can find no teachings in the references that support an obviousness rejection. Should the Examiner insist otherwise, convincing evidence showing that the suggestion or motivation to modify/combine was actually in the knowledge generally available to one of ordinary skill in the art at the time the present invention was made is respectfully requested.

The contention that the references teach each and every element of the claim 5 and 6 is not supported by the references or the Office Action. Nor has the Examiner shown convincing evidence that the suggestion or motivation to modify/combine was actually in the knowledge generally available to one of ordinary skill in the art at the time of invention. Thus, for these reasons claims 5 and 6 of the present application are believed to be patentable over Martino and Nagata.

In view of the foregoing amendments and remarks, it is believed that the application, including claims 3 through 6, is in condition for allowance. Early and favorable action is respectfully requested.

Respectfully submitted,



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